

Standards of Public Land Health

Evaluation of 64035 STEWARDSON Allotment

[12/06/2006]

The Roswell Field Office conducted a (RHA) Rangeland Health Assessment at 1 IDSU study site within Stewardson, allotment #64035. This assessment evaluated Soil/Site Stability, Hydrologic Function and Biotic Integrity indicators within the vicinity of this study site. Existing monitoring data was incorporated into and in support of this field assessment. A summary of this assessment is attached and shown in the following table.

Study Area or Assessment Area	UPLAND			BIOTIC			RIPARIAN		
	Meets	Monitor an Indicator	Does Not Meet	Meets	Monitor an Indicator	Does Not Meet	Meets	Monitor an Indicator	Does Not Meet
64035-IDSU-A156	X			X			N/A		

Twenty-two (22) indicators for Rangeland Health were evaluated for public land on Stewardson allotment #64035. Ten of these assessed soil site stability; 11 hydrologic function; and 13 biotic integrity. These qualitative assessments in conjunction with quantitative information gathered from previous data collected on 1 IDSU trend plot location within this allotment were utilized to make rangeland health determinations. Quantitative evaluations are performed by the Roswell Field Office, which include some or all of the following: ground and vegetative cover and composition, production, frequency and ecological condition. These collections which were initiated in the late 1970's/early 1980's are scheduled and conducted approximately every 5 years.

The Stewardson allotment is approximately 1,848 acres in size. The majority of the allotment is private land. About 25% of the allotment is state land, and approximately 2% (~40 acres) is public land (BLM), which contains the only study site on the allotment. The allotment consists of very gently sloping, nearly flat terrain ranging in elevation from approximately 3770 feet to 3900 feet. This site was visited on April 23, 2007 and is within a Loamy SD-3 ecosite. Most of the allotment is within this ecosite. No livestock were observed on the allotment.

Site 64035-IDSU-A156 has relatively stable soil. All soil stability indicators rated "slight to moderate" or "none to slight". There has been some soil loss as indicated by pedestalling. Small terracettes have formed but appear to be vegetating. Open areas also appear to be revegetating. No rills or gullies were observed near the site. There has been some reduction in soil surface resistance to erosion in the plant interspaces and patchy open areas.

Hydrologic function was rated similarly. Bare or open areas are resulting in increased runoff and reduced infiltration.

Most indicators assessing biotic integrity for the site rated "slight to moderate" or "none to slight". Production was good. Litter amount was within the expected range. F/S groups rated "moderate" due to the dominance of burro grass and tobosa grass on the site and the significant reduction in black grama and other desirable grasses. Creosote bush and snakeweed have also increased on the site beyond what is expected in the ESD. Invasive Plants rated "slight to moderate" due to the patchy encroachment of creosote bush. Habitat is satisfactory for pronghorn and mule deer. The area is used by pronghorn and mule deer, but the lack of vegetative diversity diminishes the quality of the habitat.

Recommendations: There has been a substantial shift in composition within the grass community. Consider prescribed burning or other disturbance (i.e. herd effect) followed by appropriate rest to improve vegetative diversity. Consider changing the timing and duration of grazing to allow desirable forage plants to re-establish and reproduce. Consider treatment of creosote bush to prevent it's encroachment.

RFOs Upland and Biotic Standard Assessment Summary Worksheet			
SITE 64035-IDSU-A156			
Legal Land Desc	NWSW 33 0090S 0230E Meridian 23	Acreage	40
Ecosite	042CY007NM LOAMY SD-3	Photo Taken	Y
Watershed	13060008130 BERRENDO		
Observers	JACKSON; DILLEY	Observation Date	04/23/2007
County Soil Survey	NM644 CHAVES NORTH	Soil Var/Taxad	
Soil Map Unit	URB	Soil Taxon Name	UPTON
Texture Class	NM644 SIL	Soil Phase	UPTON- REAKOR
Texture Modifier	NM644		
Observed Avg Annual Precipitation		Observed Avg Growing Season Precipitation	
NOAA Annual Precipitation	10.55	NOAA Growing Season Precipitation	8.18
NOAA Avg Annual Precipitation	9.73	NOAA Avg Growing Season Precipitation	8.01
Disturbances and Animal Use:	No livestock use. Antelope and mule deer use the allotment.		
Part 2. Attributes and Indicators			
		Departure from Ecological Site Description/Ecological Reference Areas	

Attribute	Indicators	Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S H	Rills					X
Comments:	No rills. Area is nearly flat.					
S H	Water Flow Patterns				X	
Comments:	Patterns are longer and less stable on bare areas created by terracette formation. (Permittee constructed a ditch east of BLM on private land to prevent overland flow from inundating private residence)					
S H	Pedestals and/or Terracettes				X	
Comments:	Old pedestalling in interspaces/bare areas. Terracettes are revegetating.					
S H	Bare Ground					X
Comments:	Less than expected. Ground cover provided by tobosa grass and burro grass.					
S H	Gullies					X
Comments:	None observed.					
S	Wind-scourd, Blowouts, and/or Deposition Areas					X
Comments:						
H	Litter Movement					X
Comments:	Very little movement. Uniformly distributed.					
S H B	Soil Surface Resistance to Erosion				X	
Comments:	Some reduction in the interspaces.					
S H B	Soil Surface Loss or Degradation				X	
Comments:	Some soil loss as indicated by pedestals.					
H	Plant Community Composition and Distribution Relative to Infiltration and Runoff				X	
Comments:	Bare or areas with reduced cover are subject to increased runoff and reduced infiltration. Grass cover appears to be increasing. The area is likely recovering from severe drought.					
S H B	Compaction Layer					X
Comments:						
B	Functional/Structural Groups			X		
Comments:	The area has transitioned to a burro grass / tobosa grass grassland. Black grama and blue grama are significantly reduced. Creosote bush and snakeweed are more abundant than expected.					
B	Plant Mortality/Decadence					X

Comments:						
H B	Litter Amount				X	
Comments:	Within expected range of 25-30%					
B	Annual Production					X
Comments:	>80% of potential.					
B	Invasive Plants				X	
Comments:	Patchy creosote bush encroachment.					
B	Reproductive Capability of Perennial Plants					X
Comments:	Desirable grasses produced seed in 2006, but the significant reduction in desirable grasses such as black grama suggests that the timing, duration, and /or intensity of grazing use has been a problem in the past.					
S	Physical/Chemical/Biological Crusts				X	
Comments:	Evident throughout, but continuity is broken.					
B	Wildlife Habitat					X
Comments:	Habitat is satisfactory pronghorn antelope and mule deer and is used by both. The reduced vegetative diversity reduces the quality of the habitat.					
B	Wildlife Populations				X	
Comments:						
B	Special Status Species Habitat					X
Comments:	N/A					
B	Special Status Species Populations					X
Comments:	N/A					

Part 3. Summary

A. Indicator Summary - Each of the indicators are associated with one or more of the attributes below. An indicator is placed in a category (columns) above and summed for each of the Standard Attributes.

Standard Attribute		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
S	Soil	0	0	0	5	5
H	Hydrologic	0	0	0	6	5
B	Biotic	0	0	1	5	7

B. Attribute Summary. In this table, the Extreme and Extreme to Moderate columns in the table above are merged for the *Does not Meet* column, Moderate becomes *May Need More Info*, and

Slight to Moderate and None to Slight merge to form the *Meets* columns. Values from the table are summarized below. Space is provided for rationale of the determination. This space should most certainly be used when the determination by the ID team conflicts with the summarized values. Provide the sources of information that lead to the determination. X out the appropriate box for each attribute to denote final agreed upon determination by the ID team.

Attribute	Rationale	Does Not Meet	May Need More Info	Meets
Soil	Soils are relatively stable but there has been some soil loss as indicated by plant pedestals. Water flow patterns are generally short and stable. Bare areas appear to be revegetating.	0	0	10
Hydrologic		0	0	11
Biotic	Area has good production, but has transitioned to a burrograss/ tobosa grass grassland with an increasing shrub component.	0	1	12

Site Notes: Soils are relatively stable, but soil loss has occurred as indicated by plant pedestals. The area appears to be recovering from drought. Flow patterns are beginning to revegetate. The area has transitioned to a burro grass / tobosa grass grassland with an increase in shrubs and half shrubs such as creosote bush and snakeweed. According to the permittee, the area is regularly used by antelope and mule deer.

This site did not have a permanent study plot. Photos were taken from the following coordinates. 13S 534554 3705320.9. Photo #1 is the frame at this location. Photo #2 is looking at 0 degrees; photo #3 is looking at 120 degrees; photo #4 is looking at 240 degrees. All directions are corrected for declination.

Plants encountered included: shrubs: LADI2, GUSA2 forbs: ERBO (filaree), PLPA (indian wheat), verbena grasses: HIMU, SCBR, BOER, BOGR, BOLA2 (silver beardgrass), ARPU, ARDI, ARIST

Determination of Public Land (Rangeland) Health for 64035 STEWARDSON

The Record of Decision (ROD) for the New Mexico Standards for Public Land Health and Guidelines for Livestock Grazing Management (dated January 2001) adopted three Standards for Public Land Health. These are (1) Upland Sites Standard, (2) Biotic Communities, Including Native, Threatened, Endangered, and Special Status Species Standard and (3) Riparian Sites Standard.

The ROD also established a process for the BLM Field Offices for implementation. Through a public participation process, the Roswell Field Office developed and adopted indicators to use in conjunction with existing monitoring data to assess these standards.

Field assessment worksheets and other available data that evaluate the local indicators were completed for this allotment. Based on these assessments, it is my determination that public land within Stewardson, allotment #64035 meets the (1) Upland Sites standard and (2) Biotic Communities, including Native, Threatened, Endangered, and Special Status Species standard. There are no public land Riparian areas on this allotment, therefore this standard was not addressed.

/s/ EDDIE BATESON
Assistant Field Manager

08/24/2007
Date